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09/286,119	04/02/1999	ITALO GOFFI	ITALO-ET-AL-	4550

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EXAMINER

LORENZO, JERRY A

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 08/14/2002

19

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/286,119

Applicant(s)

GOFFI ET AL.

Examiner

Jerry A. Lorengo

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 12-21 and 30-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-21 and 30-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

(1)

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,314,814 to Deroode.

Regarding applicant claims 12 and 20, Deroode discloses a method for the thermal sublimation transfer decoration of three-dimensional substrates comprising the steps of:

(1) Providing a substrate 10 to be decorated onto a work bench means 30,31,32 (column 6, lines 8-34);

(2) providing a sublimable color transfer support comprising a flexible and thermally deformable polymeric support skin 15 on which is carried a sublimable color pattern 16 (column 4, lines 31-65; column 5, lines 51-59);

(3) contacting (covering) the sublimable color transfer support 15,16 in the form of a sheet against the substrate 10 held on work bench means 30,31,32 within a vacuum chest means 20 and creating a vacuum between the substrate 10 and the sublimable color transfer support 15,16 by way of vacuum chest means 20 thereby forcing sublimable color transfer support 15,16 into intimate contact with the substrate 10 (column 5, lines 56-66; column 6, lines 3-37);

(4) heating the sublimable color transfer support 15,16 and substrate 10 while under intimate vacuum contact by way of heating means 38 located above the work bench means 30,31,32 thereby causing said sublimable pattern to sublime, penetrate, and thereby decorate substrate 10 at a temperature of about 200 C for a period of about 30 seconds (column 4, lines 15-16; column 7, lines 4-36; column 7, line 40); and

(5) after transfer and ceasing of the heat application, separating the decorated substrate 10 from the spent sublimable color transfer support 15,16 (column 7, lines 45-48).

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(2)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-16 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode, as set forth in section (1), above, in view of WO 96/29208 to Fenzi.

Although Deroode, in section (1), above, discloses a method for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure, he does not specifically disclose, as per applicant claims 14-16 and 30-34, that the substrate to be decorated is preliminarily surface treated (cleaned, de-greased, etc.) or coated with liquid or powder paints before it is advanced to the step of sublimation transfer.

It would have been obvious to one of ordinary skill in the art at the time of invention to submit the article of Deroode to preliminary preparation steps motivated by the fact that Fenzi, also drawn to methods for the thermal sublimation transfer printing of substrates with vacuum assist, discloses, as per applicant claims 14 and 30-32, that the preparation of the surface by cleaning, degreasing, chemical and/or electrolytic conversion prior to the submittal of the article to sublimation transfer is a known and usual operation (page 5, lines 2-4).

It would have been obvious to one of ordinary skill in the art at the time of invention to submit the article of Deroode to preliminary painting using liquid or powder paints, as set forth in applicant claims 15, 16, 33 and 34, motivated by the fact that Fenzi also discloses that the coating of the article with liquid or powder paints prior sublimation transfer is known and useful in avoiding the phenomena of diffusion with the colors of the transfer support (page 5, lines 5-11).

(3)

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode, as set forth in section (1), above, or, in the alternative, over the references as combined in section (2), above.

Although Deroode, as set forth in sections (1) and (2), above, discloses a method for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure, he does not specifically disclose, as per applicant claim 19, that the artifact is vacuum wrapped and heated in a preliminary step prior to transfer in order to achieve thermoforming of the sublimable color transfer support against the substrate to be decorated.

Deroode, however, does disclose that the sublimable color transfer support is preheated prior to its vacuum placement against the substrate followed by intimate contact by the application of vacuum pressure followed by continued heating in order to bring about complete sublimation transfer of the decoration from the sublimable color transfer support to the substrate (column 7, lines 1-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to supply a separate and preliminary heating and vacuum wrapping step prior to the actual heat and vacuum transfer motivated by the fact that the preliminary heating of the sublimable color transfer support would render it more flexible (as it is a thermoplastic) thus ensuring intimate contact between it and the substrate to be decorated and thereby increase the effectiveness of the sublimation transfer itself.

(4)

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode, as set forth in section (1), above, or, in the alternative, over the references as combined in section (2), above, in further view of U.S. Patent No. 4,923,847 to Ito et al.

Deroode, as set forth in sections (1) and (2), above, discloses a method for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure. Although he discloses that the support film 15 making up the sublimable color transfer support may be comprised of materials such as polypropylene, polyester, silicone, and polycarbonic materials such as PTFE (column 4, lines 18-20), he does not specifically disclose, as per applicant claim 18, that the support material 15 is composed of polyvinyl alcohol.

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Ito et al., however, also drawn to thermal sublimation transfer methods, discloses a sublimable color transfer support which comprises support or base film 1 on which is carried a sublimable transfer dye. Ito et al. discloses that the base film 1 may comprise papers or films such as condenser paper, aramide film, polyester film, polystyrene film, polysulfone film, polyimide film, *polyvinyl alcohol film* (emphasis added), and cellulose films (column 4, lines 65-68; column 5, line 1; Figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize a polyvinyl alcohol film, as taught by Ito et al. in place of the films (polyester, etc.) disclosed by Deroode motivated by the fact that Ito et al. discloses that polyvinyl alcohol films are known for use as supports for sublimation transfer films and furthermore by the fact that Deroode discloses that it is self-evident that other materials besides those disclosed by him may be used (column 4, lines 21-23).

(5)

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode, as set forth in section (1), above.

Although Deroode, as set forth in section (1), above, discloses a method for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure, he does not specifically disclose, as per applicant claim 17, that the exhausted transfer support 15 is removed from the decorated surface of the substrate 10 after the handling and/or installation of the decorated substrate.

It would have been obvious to one of ordinary skill in the art at the time of invention, however, to remove the exhausted transfer support from the decorated substrate after cooling and just prior to ultimate use by an end user motivated by the fact process films and sheets are commonly left attached to manufactured articles, especially articles having surfaces which can be scratched, dinged, scuffed or marred during transport between the points of initial manufacture and end use.

(6)

Claims 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,893,964 to Claveau in view of U.S. Patent No. 4,314,814 to Deroode.

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Regarding applicant claim 13, Claveau discloses a method for the thermal sublimation transfer decoration of three-dimensional substrates comprising the steps of:

- (1) Providing a substrate 2 to be decorated;
- (2) providing, as per applicant claim 21, two sublimable color transfer support membrane sheets 8a,8b comprising a flexible and thermally deformable polymeric support skin on each of which is carried an ink 3,3' comprising a support having a sublimable color pattern thereon (Figure 12; column 4, lines 16-37; column 2, lines 18-23);
- (3) placing the substrate 2 between the membrane sheets 8a,8b and carried inks 3,3' and welding the borders of each of the membrane sheets 8a,8b to form a sealed pouch 8 but leaving an aperture 8d which will allow the connecting of the pouch 8 to a vacuum source (column 4, lines 35-42);
- (4) creating a vacuum between the substrate 2 and the sublimable color transfer supports (inks) 3,3' carried on the pouch 8 by way of vacuum means thereby forcing the sublimable color transfer supports 3,3' carried on the pouch 8 into intimate contact with the substrate 2 (Figures 13 and 14; column 4, lines 43-49); and
- (4) heating the sublimable color transfer supports 3,3' carried on the pouch 8 and substrate 2 while under intimate vacuum contact by way of heating means thereby causing said sublimable pattern to sublime, penetrate, and thereby decorate substrate 2 at a temperature of about 200° C for a amount of time sufficient to ensure complete transfer (column 4, lines 16-20).

Although Claveau discloses the step of heating at a temperature of about 200° C, he does not specifically disclose the claimed time period of heating (30 seconds) set forth in applicant claim 13. Although Claveau discloses the steps of wrapping, evacuating and heating, he does not specifically disclose, as per applicant claim 13, the step of removing, after cooling, the exhausted supporting membrane pouch 8 and carried inks 3,3' from the decorated surface of the substrate 2.

It would have been obvious to one of ordinary skill in the art at the time of invention to remove the spent transfer support (pouch) of Claveau from the decorated substrate 2 after transfer motivated by the fact that Deroode, also drawn to methods for the sublimation thermal transfer of three-dimensional objects by way of vacuum assisted thermal transfer discloses that it is known to separate the decorated substrate 10 from the spent sublimable color transfer support

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15,16 after transfer (column 7, lines 45-48). Finally, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the claimed transfer times and temperatures set forth in applicant claim 13 motivated by the fact that Deroode also discloses that heating the sublimable color transfer support 15,16 and substrate 10 while under intimate vacuum contact by way of heating means 38 at a temperature of about 200°C for a period of about 30 seconds is known in the art (column 4, lines 15-16; column 7, lines 4-36; column 7, line 40).

(7)

***Response to Amendments***

In response to the amendments filed May 14, 2002, a new grounds of rejection, set forth in section (2), above, has been established. This is in response to the amendments to applicant claims 14-16 and the addition of new claims 30-34. The objection to claim 20 and rejection of claims 12-21 under the second paragraph of 35 U.S.C. § 112 have been withdrawn in response to the amendments to applicant claims 12-20.

(8)

***Response to Arguments***

Applicant's arguments filed May 14, 2002 have been fully considered but they are not persuasive.

The Applicant argues that the invention, as set forth in applicant claim 12, is patentable over the prior art of record, and specifically Deroode, because Deroode does not disclose that the vacuum created between the workpiece and the transfer support is provided through a workbench upon which the article is placed. The Applicant goes on to argue that the workbench of the instant invention also has several alleged advantages (such as being more energy efficient and having fewer moving parts) compared to the workbench disclosed by Deroode.

Firstly, the examiner respectfully submits that Deroode discloses that a vacuum is created between the article 10 and the transfer support 15,16 through a work bench 30,31,32 upon which the article 10 is supported. Deroode discloses that the bracket 30 of the work bench may be porous (column 6, lines 29-34) which would enable a vacuum to be pulled through the porous bracket body 30 and pull the transfer support 15,16 against the article 10. Thus, contrary to the Applicant's argument, Deroode does provide for the creation of a vacuum between the article 10



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and the transfer support 15, 16 through the work bench 30,31,32. Secondly, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., energy efficiency, fewer moving parts) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regards to the rejection of claims 13 and 21, the Applicant argues that the instant invention, unlike that of Claveau, discloses a supporting base having a transferable decoration carried thereon. The Applicant argues that claim 13 disqualifies the two-part transfer support of Claveau comprising a transfer support 8 upon which are placed and carried an inker sheet 3 having a transferable decoration thereon (column 4, lines 16-49).

The examiner respectfully submits, however, that claim 13, as written, requires only that the pattern or decoration be carried on the supporting base. Thus, because Claveau discloses that the inker is placed on the membrane prior to contact with the object 2 to be decorated (column 4, lines 29-31), Claveau meets this limitation. Claveau further shows this relationship in Figures 4 and 9.

Finally, the Applicant also argues that the combination of the teachings of Deroode et al. with those of Claveau to illustrate the obviousness of the claimed transfer times and temperatures is improper because "the decoration systems disclosed in Deroode and Claveau have nothing in common . . ." The examiner respectfully disagrees. Both Deroode and Claveau are drawn to methods of sublimation transfer printing three-dimensional substrates whereby a transferable decoration is transferred to the substrate under the effects of heat and a vacuum pressure created between the substrate and the transfer support. Thus, the examiner respectfully submits, the skilled artisan would have had no hesitation in looking to the teachings of Deroode to supply direction in determining workable times and temperatures under which to practice the invention of Claveau.

Therefore, the rejection of claims 12-21 and 30-34, as set forth in sections (1) through (6), above, are proper and stand.

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(9)

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

(10)

Applicant is encouraged to **FAX After Final Amendments** (37 CFR 1.116) to expedite delivery to the Examiner. The Group 1734 Facsimile number is **(703) 872-9311**. A duplicate mailed copy of the facsimile transmission is **not required** and will only serve to delay the processing of your application.

If the applicant prefers to mail in After Final correspondence it is highly recommended that such be mailed to **BOX AF** which will also facilitate processing from the mailroom and within Group 1700.

(11)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (703) 306-9172. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

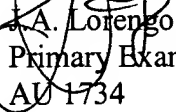
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7115 for regular communications and (703) 305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



J.A. Lorengo  
Primary Examiner  
AU 1734

August 11, 2002